THE TOOL COMPANY

230V AUTOMATIC BATTERY CHARGER

■ STOCK No.78667 ■ PART No.BC30A

• INSTRUCTIONS •

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS TOOL.

CE

11/2004

GENERAL INFORMATION

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

230V AUTOMATIC BATTERY CHARGER

■ STOCK No.78667 ■ PART No.BC30A

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DECLARATION OF CONFORMITY

We
Draper Tools Ltd. Hursley Road, Chandler's Ford, Eastleigh, Hampshire.
SO53 1YF. England.

Declare under our sole responsibility that the product:

Stock No:- 78667.

Part No:- BC30A.

Description:- BATTERY CHARGER.

To which this declaration relates is in conformity with the following directive(s)
89/336/EEC & 73/23/EEC

With reference to: EN55014 & EN60335-2-29

JOHN DRAPER
Managing Director

12/11/2004

SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

Stock No.	78667
Part No.	BC30A
Supply voltage	230V~50Hz
Charging voltage	12/24V
Input power	
12V	380W
24V	370W
No. Charging steps	4
Effective charging current (12V)	30A
Av. Charging current EN60335 (12V)	20A
Dimensions	330x280x210mm
Weight	9.7kg

WARNING: ALWAYS WEAR GLOVES AND EYE PROTECTION WHEN DEALING WITH LEAD ACID BATTERIES.

GUARANTEE

Draper Tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for a period of 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase.

Should the machine develop any fault, please return the complete tool to your nearest authorized warranty repair agent or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England. Telephone: (023) 8026 6355.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accident, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the 12 month period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.

POWER SUPPLY

CONNECTING YOUR MACHINE TO THE POWER SUPPLY: (230V ONLY)
To eliminate the possibility of an electric shock your machine has been fitted with a BS approved, non rewireable moulded plug and cable which incorporates a fuse, the value of which is indicated on the pin face of the plug. If the plug is marked with the ASTA symbol and the fuse needs replacing, an ASTA approved BS1362 fuse must be used of the same amp rating. If the plug is not ASTA marked, a fuse with the ASTA symbol, BS Kitemark, or both ASTA and BS Kitemark, of the same amp rating should be used.

The fuse cover is detachable, never use the plug with the cover omitted. If a replacement fuse cover is required, ensure it is the same colour as that visible on the pin face of the plug (i.e. red). Fuse covers are available from your Draper Tools stockist.
If the fitted plug is not suitable, it should be cut off and destroyed. *The end of the cable should now be suitably prepared and the correct type of plug fitted. See below.

***WARNING:**
A plug with bare flexible wires exposed is hazardous if engaged in a live power socket outlet.

WARNING: THIS APPLIANCE MUST BE EARTHED.
The mains lead is coloured Green and Yellow - Earth, Blue – Neutral and Brown – Live. As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured green and yellow must be connected to the terminal in your plug marked with the letter 'E' or by the earth symbol ⏚ or coloured green or green and yellow.
The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black or blue.
The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red or brown.

EXTENSION LEAD CHART:
Extension lead sizes shown assure a voltage drop of not more than 5% at rated load of tool.

Ampere rating (on Name plate)	3	6	10	13
Extension cable length (Metres)	Wire Size mm^2			
7.5	0.75	0.75	1.0	1.25
15	0.75	0.75	1.0	1.5
22.5	0.75	0.75	1.0	1.5
30	0.75	0.75	1.25	1.5
45	0.75	0.75	1.5	2.5

DRAPER
THE TOOL COMPANY

GENERAL SAFETY INSTRUCTIONS FOR BATTERY CHARGERS

WARNING:
Please read the following instructions carefully, failure to do so could lead to serious personal injury.
IMPORTANT:
Draper Tools Limited recommends that this machine should not be modified or used for any application other than that for which it was designed. If you are unsure of its relative applications do not hesitate to contact us in writing and we will advise you.

1. WARNING - RISK OF EXPLOSION GASES:

a. WORKING IN THE VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS, BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS OF UTMOST IMPORTANT, IF YOU HAVE ANY DOUBT, THAT EACH TIME BEFORE USING THE CHARGER, YOU READ THIS MANUAL AND FOLLOW THE INSTRUCTIONS.

b. To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Review warning marks on all these products and on the engine.

2. PERSONAL PRECAUTIONS:

a. When working near a lead-acid battery, someone should be within range of your voice, close enough to come to your aid.

b. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.

c. Wear complete eye, hand and clothing protection. Avoid touching eyes when working with batteries.

d. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eyes, immediately flood eye with cool, clean running water for at least 15 minutes and get medical attention immediately.

e. NEVER smoke or allow a spark or flame in vicinity of battery or engine.

f. Be extra cautious to reduce risk of dropping a metal tool onto a battery. It could spark or short circuit the battery or, any other electrical part possibly causing an explosion.

g. When working with a lead-acid battery, remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current high enough to weld a ring, or the like to metal, which may cause severe burns.

h. Use the battery charger for charging "lead-acid, lead-calcium and gel filled batteries only". Do not use for charging dry-cell or Ni-Cad batteries that are commonly used with home appliances. For example, radios, torches etc. These batteries may explode and cause injury to persons and damage to property.

i. NEVER charge or boost and frozen battery.

j. NEVER allow clamps to touch one another or to contact the same piece of metal to prevent arcing.

3. OTHER IMPORTANT SAFETY INSTRUCTIONS:

a. Do not use the charger in damp or wet conditions.

b. Keep out of reach of children.

c. Do not submerge in water.

d. Do not operate near flammables such as petrol, paraffin, or thinners etc.

e. If the charger receives a sharp blow or is otherwise damaged in any way, do not disassemble. Have it checked by a qualified service person. Return to source.

SAFETY FEATURES

This battery chargers is fitted with the following safety features:

1. Polarity inversion protection.

2. Short circuit overload protection.

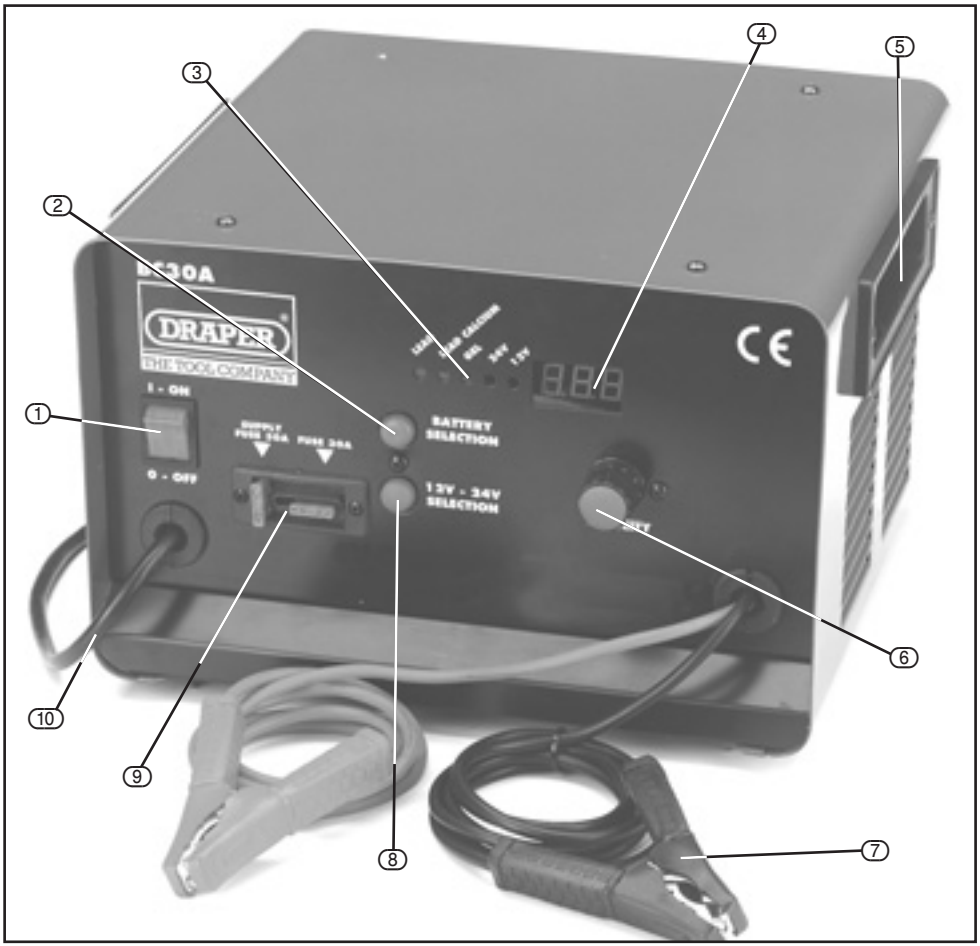
3. Thermal overload protection.

Explanation of Symbols Featured on Rating Label:

This is an indication that the machine is fitted with automatic overload protection.

NOTE:
After an extended period of charging especially in the "fast" charge mode, the thermal cut-out protection may be activated. This is to allow the charger a sufficient amount of time to cool down. Once the charger has sufficiently cooled, then charging will recommence automatically.

GETTING TO KNOW YOUR BATTERY CHARGER



1. On/Off switch.
2. Battery selector button.
3. Indicator LED's.
4. Digital display.
5. Handle.
6. Charge capacity dial.
7. Insulated battery clamps.
8. Voltage selector button.
9. 30A Fuses.
10. BS Moulded plug and cable.

UNPACKING: After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the battery charger and contact the dealer from whom it was purchased.
The packaging materials (plastic bags, polystyrene etc.,) must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

BATTERY INFORMATION:
Before proceeding with the charging of the battery ensure that the battery to be charged is within the recommended amperage range for the charger (see table below).

PART NO.	RECOMMENDED MIN. Ah	RECOMMENDED MAX. Ah
BC30A	30Ah	200Ah

If the battery amperage rating is not stated or you are unsure about the rating please see the table below for some typical ratings.

EXAMPLES OF TYPICAL VEHICLE BATTERY Ah RATINGS: (For guidance only).

ENGINE CAPACITY					
<1300cc	5 - 15Ah	15 - 30Ah	35 - 45Ah	-	60 - 110Ah
>1300cc	-	-	45 - 65Ah	45 - 65Ah	60 - 110Ah
Diesel	-	-	60 - 90Ah	60 -90Ah	60 - 110Ah

BEFORE CHARGING YOUR BATTERY:
NOTE: We recommend that the battery is disconnected from the vehicle. This will avoid any possible damage to the alternator. Loss of codes for audio and security systems can be avoided by connecting a Draper Memory Saver (Part No.CMS1 - Stock No.38330) or similar product before disconnecting the battery. Check the car battery voltage matches that of the charger's capability.

Before connecting the battery charger to the battery ensure that the charger and battery are on a level surface. If the battery has cell filled caps loosen and remove them to assist the escape of charging gases. (If the battery being charged is a maintenance free, gel filled or sealed battery, refer to the appropriate section below). Once the cell caps have been removed, check the level of the electrolyte and top up if necessary.

MAINTENANCE FREE BATTERIES:
(Low Maintenance Batteries)
These batteries often have cells with no filler caps and therefore cannot be topped up with distilled water.

GEL FILLED AND OTHER SEALED BATTERIES:
This type of battery normally contains gel electrolyte and may be referred to as "Dry Fit". They are most commonly used in applications such as, electric golf trolley's, mobility wheelchairs, camping, caravanning and marine activities etc. To charge this type of battery, requires a charger fitted with a temperature sensor compensation which allows continuous adjustment of the unsupervised charge to avoid overcharging and loss of electrolyte by 'gassing' which can shorten the life of the battery.

OPERATION AND USE

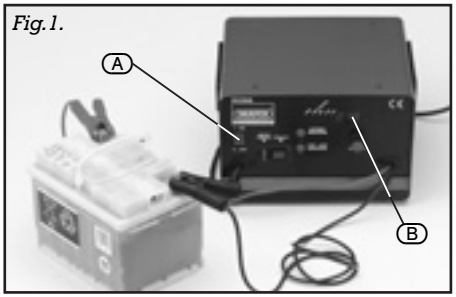
It is recommended to remove the battery from the vehicle. With the machine disconnected from the power supply, connect the positive red clamp (+) to the positive terminal of the battery and connect the negative black clamp (-) to the negative/earth terminal of the battery.

CONNECTING (FIG.1.):
Connect the battery charger to the power supply, and press switch (A) into the 'I - ON' position.

The display (B) will show the battery voltage e.g. U07 would be 7 volts. It will then display the charge current e.g. A05 would be 5 amps.

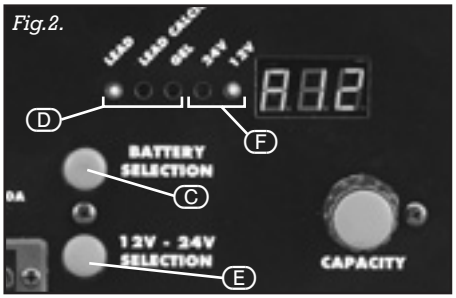
If the battery charger has been connected with the polarity reversed, i.e. positive to negative, negative to positive, the display will read noP.

Fig.1.



BATTERY TYPE SELECTION (FIG.2.):
With the unit switched 'On' press button (C) to cycle through the indicator LED's (D) and select the appropriate charging mode for the battery type. Press button (E) to cycle through the indicator LED's (F) and select the appropriate voltage for the battery type.

Fig.2.



BATTERY CAPACITY SELECTION (FIG.3.):

Rotate dial (G) until the batteries Ah (amp hour) rating is displayed (30 - 200Ah). The Ah rating is usually marked on the battery by the voltage information. Once set the charger will input the appropriate current into the battery according to it's size/capacity.

NOTE:

On all maintenance type batteries, remove the filler caps and adjust the levels before commencing charging. Failure to remove the caps could lead to a build up of the explosive gases which are released during charging. Stand the battery on a suitable surface, in a well ventilated area.

After the charge cycle is complete the display will read 'END'. When this point is reached and if the charger is left connected the buffer function will monitor the voltage and if necessary recommence a trickle charge to keep the battery at the optimum level. During the charge period, occasionally check the battery condition is good. When charging is complete, press the switch to the '0 - Off' position. Disconnect the charger leads and refit the battery as appropriate.

NOTE:

Ensure the maintenance caps (if applicable) are replaced and tight.

Fig.3.

THERMAL OVERLOAD PROTECTION (FIG.4.):

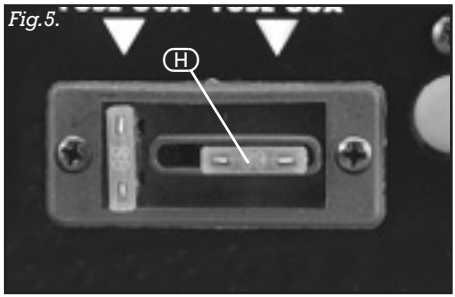
The thermal overload protection will activate if a problem is detected to prevent the unit overheating. When 'H00' is displayed the charge current will stop until the unit has cooled down.

Fig.4.

NOTE:
If the charger is accidentally operated when not connected to a battery, power to the leads is denied to prevent sparking or short circuit.

FUSE (FIG.5.):
As an additional protection method the unit is fitted with 30 amp blade fuse. If a problem is encountered the fuse will blow to avoid damage to the charger or battery. Fuse (H) is a spare.
Switch off and disconnect the charger, replace the fuse and retry. If the fuse blows again, contact an authorised service agent.

Fig.5.



DRAPER TOOLS LIMITED,
Hursley Road, Chandler's Ford, Eastleigh, Hants. SO53 1YF. U.K.
Helpline: (023) 8049 4344.
Sales Desk: (023) 8049 4333.
General Enquiries: (023) 8026 6355.
Fax: (023) 8026 0784.

http://www.draper.co.uk
e-mail: sales@drapertools.com

YOUR DRAPER STOCKIST

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